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BLAINE OR CLIPP

DISTRICT: Silver

LOCATION: About three miles northeast of the Red Cloud Mine and about ten miles from Hoge's ranch on the east side of the Colorado river in Yuma Counth, Arizona.

OWNERS: G. W. Cram, principal stockholder can be located thru F. B. Church of Western Precipitation Company, Los Angeles.

CLAIMS: One and a Millsite located on the Colorado River about seven miles by road north west of the mine.

DATE: October 12, 1919.

HISTORY:

Operated in eighties and credited with an output of over two million ounces of silver. Tailings dump indicates about thirty thousand tons of eight ounce ore. Property operated by hand by means of tunnels and shallow winzes and from the size of the open stopes now remaining it is evident that considerably more than thirty thousand tons of ore was extracted from the property. Property was closed down in 1890.

NOTES:

GEOLOGY

Vein is a fissure of movement in Andesite with considerable cross fracturing and a great amount of brecciation between hanging and foot wall fractures. Strike of vein north and south with dip to the west of eighty degrees. Brecciated material filled with chalcedony, calcite and barite and minerals are silver usually in sulphide or chloride form with some lead.

DEVELOPMENT

Property developed by means of two cross cut tunnels with difference in elevation of about eighty feet. These tunnels indicate two large stopes. The first or north stope from ten to eighty feet in width and over one hundred feet long at depth of one hundred and fifty feet. The south stope irregular in shape and varying from two streaks five feet in width to an area about forty by one hundred where both hanging and foot wall streaks as well as intermediate brecciated material was mined.

Major portion of the ore developed by present workings has been mined out and present production would have to come from lower

levels as well as from the walls and ends of present stopes where sampling indicates a considerable amount of commercial ore which was probably too low grade to handle during the former operating period of the Company.

Considerable equipment consisting of windlass and rope and ladders would be necessary to thoroughly sample the property since all equipment has been removed and it is evident that the ground below the main stope on the north end and below the tunnel level has been mined out and refilled altho to what extent cannot be determined without sampling vertical winzes which are inaccessible without a windlass.

Reports by H. B. Meade would indicate about 125,000 tons of 13 oz. silver ore, but his method of arriving at this tonnage is not indicated in report except to state the total width and length of ore and elevation after which he deducts 25% for shrinkage (for what reason I cannot determine, if his original measurements were correct). He then deducts 30,000 tons for ore milled as per tailings dump in evidence on river.

No report on tonnage could be correct without a very careful survey and after careful sampling of the property which would require probably 200 samples. This tonnage would be limited to borders of old stopes pillars, ends of stopes, and downward extensions where ore was too low grade to mine during time of operation.

Samples indicated below show an average of 19 ounces of silver with small percentage of lead and would suggest cyanidation as a solution to the problem presented. Cost of this work would be great and since cyanidation would be of little value for other complex ores of the district, I doubt if there is sufficient tonnage available in the Blaine to justify the abnormal expense for pipe lines, mill, etc.

No.	Location	Width	Au	Ag	Pb
1	N. drift face	36"	---	5.4	.95
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5	S. end, Back S. stope	8'	---	21.70	.85
6	S. end, N. stope	36"	---	23.30	.79
7	60' S.N. stope	12"	---	5.60	.69
8	100' S.N. stope above winze	60"	---	24.40	.69
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No.	Location	Width	Au	Ag	Pb
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11	50' N. of upper X cut tunnel	72"	---	18.30	.58

Composite - Au. 00 - Ag. 19.40 -- Ins. 58.40 -- Fe. 9.8 -- CaO 11.2 -- Zn - 00. -- Pb. .79. --

CONCLUSION

The ores of this property should be amenable to volatilization and if the present price of $300,000 were reduced to a reasonable figure the property would be of value as a producer for a joint volatilization plant to treat ores from various mines.

Report by DeCamp.

THE BLAINE SILVER MINE

A Report to the National Reduction Company

By H. B. Meade, E.M.

This property consists of the James G. Blaine Mine and Millsite, both patented.

LOCATION

The Blaine mine is situated in Silver District, Yuma County, Arizona, thirty miles due North of Yuma which is the nearest town. The millsite is on the Colorado River five miles Northwest from the mine (seven miles by road). The mine is about four miles east from the River at the nearest point, and about eight miles north from Norton's landing.

The nearest railway station is Ogilby, California, on the main line of the Southern Pacific, thirty miles from the mine via. Hoge's ferry. Blythe, California, about equally distant is situated on a branch of the Santa Fe. Yuma, Arizona, a town of about 5,000 inhabitants, situated on the Southern Pacific main line 250 miles Southeast from Los Angeles, California, and the same distance west from Tucson, Arizona, is thirty-five miles from the mine via. Picacho, California. Picacho is the nearest post office and has a tri-weekly mail service. At this point there is a power passenger ferry boat.

All heavy freighting should be done from the Southern Pacific at Laguna Dam, or from the Santa Fe at Parker, Arizona, by river boat to Norton's landing, or to Blaine millsite. From these points the roads to the mine can be made possible at a nominal cost.

HISTORY

This property was discovered in 1880. The first development was a shaft 100 feet deep which is said to have assayed 100 ozs. silver per ton from top to bottom. This was considered too low grade to ship at a satisfactory profit in those days. The property changed hands three times in as many years; finally, in 1884, a ten stamp mill was erected at the Colorado River, a road was built to the mine and for six years the property was operated. There was no machinery on the mine at any time, the drilling was done by hand, and the little hoisting necessary was done with a windlass. The ore was hauled seven miles to the mill and milled by the crude methods then in vogue. Altogether about 30,000 tons of ore was treated, resulting in a production (reported and generally believed) of $2,000,000. In 1890, the price of silver having declined, the owner closed down the mine and moved the mill to a gold property. For a quarter of a century the Blaine was forgotten. During this period the advancement in mining and metallurgy has rendered the old property as attractive as in bonanza days.

GEOLOGY

The strike of the vein is nearly North and South and the dip is nearly vertical to the West. The formation is eruptive, the country rock being ryolite on the footwall side and andesite on the hanging. A lime spar dike forms the immediate footwall which is smooth and well defined. The gangue is altered andesite and lime spar.

The silver occurs in chloride and sulphide forms, and there is no zinc, copper, lead, antimony, arsenic or allumina

to interfere with the metallurgy.

This fissure is fundamental and can be traced from a point 3,000 feet North of the Blaine to a point fully three miles to the South. At the South end it passes into the granite. At several points on this vein (locally known as the Mandavale lead) mining has been done, but the Blaine is the one great mine so far developed. All signs indicate that the values will persist with depth. There is no reason to expect any radical change in the quality or quantity of ore till the ryolite is pierced, which will not occur, I believe, at less than 3,000 feet in depth. I have come to this conclusion after an extensive study of the geology of the district. Everywhere I find the anatomy of the country favorable to a silver mine of magnitude.

DEVELOPMENT

The mine is opened by two crosscut tunnels, the lower one being about 100 feet below the croppings. These connect with drifts to North and South which open the vein to an extreme length of 720 feet. From these drifts are various crosscuts, raises, winzes and stopes aggregating about 2,000 feet of work. An ore shoot is defined 350 in length and from 30 to 50 feet in width. The mine is dry and well ventilated, and has caved but little. One stope 32 feet wide stands untimbered, while another 50 feet wide is timbered with square sets of pine and cottonwood.

EQUIPMENT AND BUILDINGS

There are none; scrap iron and adobe ruins are all that remain of a one-time busy camp.

WATER SUPPLY

The Colorado River furnished an unfailing supply of water. At the millsite where the tailings are situated there is a well from which the former mill was supplied. To bring water to the mine will require about five miles of pipe line. The lift will be about 500 feet.

ORE IN SIGHT

The work done in this mine was not for the purpose of blocking out ore, but to get the richest ore at the least expense. The ore left by the former operators as too low grade to pay by their method of operation constitutes the ore now in sight. Not being systematically developed it is hard to estimate, but I am conservative in saying that there is at least 125,000 tons of ore reasonably in sight. In a general way this can be found as follows:

Length of ore shoot	-	350 Feet
Average Width of Ore	-	40 "
Average depth from bottom of three principal winzes to the surface	-	150 "

$\frac{350 \times 40 \times 150}{10}$ equals 210,000 tons at 10 cu.ft./ton

Deduct for shrinkage 25%, or 52,500 tons, leaving 157,500 tons.

Deduct for ore formerly extracted 30,000 "

127,500 "

A detailed estimate block by block checks closely with this.

The samples taken and assayed by me give to the above tonnage an average value of 13.3 ozs. silver and $1.03 gold per ton. At the present price of silver ($.82½ per oz.) this is a total gross value of $12.00 per ton. By either the cyanide or amalgamation "all slime" processes an extraction of 90% can be obtained; and the cost of mining, milling and development should

not exceed $3.00 per ton on a basis of 300 tons per day capacity. The net profits per ton, therefore, should be $7.80, and the total result from 125,000 tons would be 975,000.

TAILINGS

On the millsite at the river there is a tailings dump which I sampled and estimated with great care, laying off the surface of the dump in square 50 x 50 feet in size and boring a sample from the centre of each square. I found 23,399 tons having an average of 8 ozs. silver, 80¢ gold and 2½# quicksilver per ton.

Of these values 75% of the gold and silver and 90% of the quicksilver can be recovered at a cost of $1.50 per ton on a basis of 100 tons per day capacity. Figuring silver at $.82½ per oz. and quicksilver at $100 per flask, the net extraction would be $8.55 and the net profit $7.05 per ton, or a total net profit of $164,963.

SUMMARY OF VALUES

Ore in Sight	$975,000.
Tailings Dump	164,963.
Total net values in sight	$1,139,963.

LATENT POSSIBILITIES

While it is impossible to see into the ground beyond the present workings, there is no reason to suppose that any 150 feet of depth in the next 3,000 feet should produce less than the first 150 feet. In other words, the possibilities of increased value with depth are at least as great as that it will be less.

Careful tests for extraction, the values left in the tailings, and the alleged former production all indicate that the

average of values in the ore formerly extracted was about 65 ozs. per ton. Assuming a mixture of one ton of 65 ozs. ore with five tons of 13 ozs. ore, the average value would be 21.66 ozs. per ton of ore from virgin ground from which the rich ore has not been extracted. At 90% extraction the gold and silver values recovered should be $17.55 per ton, and the net profit $14.55. This would be an annual profit of over $1,300,000 at 300 tons per day and 300 days per year.

RECOMMENDATIONS

A plant of 100 tons daily capacity should be erected at the tailings dump. A hoist and air compressor should be installed at the mine, and during the ten months required to work the tailings the further development of the mine should be pushed as rapidly as practicable. A mill of 300 tons daily capacity should be erected at the mine as soon as development warrants it. After working the tailings the tailings mill should be removed to the mine and incorporated into the larger mill. The tailings power plant should be left at the river for the pumping plant. A four-inch pipe line for water and a two-inch line for fuel should be laid to connect the mine with the pumping plant at the river.

I advise the use of steam rather than internal combustion engines as steam is much more reliable under desert conditions and has the added advantage of using coal or wood in case of oil scarcity.

I advise the use of ball mills for course crushing and tube mills with iron pebbles for fine grinding, the latter to be run in circuit with a suitable classifier. Exhaust steam, salt and some form of sulphuric acid should be applied in the tube mill to effect the reduction of the silver, which can then be

amalgamated in Ewell machines, which in the case of the tailings dump, will also recover the quicksilver which was lost in the former treatment by a cruder method. To this simple plant cyanide or flotation machinery can be added later if necessary.

CAPITAL REQUIREMENTS

The above equipment together with suitable freighting facilities, camp buildings, working shaft and other development required, will take about $300,000 at the present high prices.

Respectfully submitted,

(Signed) Henry B. Meade, E.M.

Los Angeles, Cal.,
October 25th, 1917.

Look for other data in Silver Folder

DISTRICT: Silver.

NAME: Blaine or Clipp

LOCATION: About three miles northeast of the Red Cloud Mine and about ten miles from Hoge's ranch on the east sideof the Colorado river in Yuma County, Arizona.

OWNERS: G. W. Cram, principal stockholder can be located thru F. B. Church of Western Precipitation Company, Los Angeles.

CLAIMS: One and a Millsite located on the Colorado River about seven miles by road north west of the mine.

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NOTES:

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Vein is a fissure of movement in Andesite with considerable cross fracturing and a great amount of brecciation between hanging and foot wall fractures. Strike of vein north and south with dip to the west of eighty degrees. Brecciated material filled with chalcedony, calcite and barite and minerals are silver usually in sulphide or chloride form with some lead.

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Property developed by means of two cross cut tunnels with difference in elevation of about eighty feet. These tunnels indicate two large stopes. The first or north stope from ten to eighty feet in width and over one hundred feet long at depth of one hundred and fifty feet. The south stope irregular in shape and varying from two streaks five feet in width to an area about foty by one hundred where both hanging and foot wall streaks as well as intermediate brecciated material was mined.

Major portion of the ore developed by present workings has been mined out and present production would have to come from lower levels as well as from walls and ends of present stopes where sampling indicates a considerable amount of commercial ore which was probably too low grade to handle during the former operating period of the Company.

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Blaine Mine #2.

Considerable equipment consisting of windlass and rope and ladders would be necessary to thoroly sample the property since all equipment has been removed and it is evident that the ground below the main stope on the north end and below the tunnel level has been mined out and refilled altho to what extent cannot be determined without sampling vertical winzes which are inaccessible without a windlass.

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Samples indicated below show an average of 19 ounces of silver with small percentage of lead and would suggest cyanidation as a solution to the problem presented. Cost of this work would be ~~mf~~ great and since cyanidation would be of little value for other complex ores of the district, I doubt if there is sufficient tonnage available in the Blaine to justify the abnormal expense for pipe lines, mill, etc.

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Composite - Au. 00 - Ag. 19.40 -- Ins. 58.40 -- Fe. 9.8 -- CaO 11.2 -- Zn - 00. -- Pb. .79 --

CONCLUSION

Rpt'd by
L. L. Camp

The ores of this property should be amenable to volatilization and if the present price of $300,000 were reduced to a reasonable figure the property would be of value as a producer for a joint volatilization plant to treat ores from various mines.

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